



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	APPLICATION NO.
09/734,124	12/11/2000	Jin-Seong Yang	5000-1-173	5250

13942 7590 05/27/2003

CHA & REITER  
411 HACKENSACK AVE, 9TH FLOOR  
HACKENSACK, NJ 07601

EXAMINER

LOPEZ, CARLOS N

ART UNIT PAPER NUMBER

1731

7

DATE MAILED: 05/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/734,124

Applicant(s)

YANG ET AL.

Examiner

Carlos Lopez

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 1 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 2-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### ***Election/Restrictions***

Applicant's election with traverse of the invention elected in Paper No. 7 is acknowledged. The traversal is on the ground(s) that the two groups are sufficiently related to justify the inclusion and examination of all the claims in one application. This is not found persuasive because there are no common patentability issues between groups II and I. Applicant generally alleges that the group II and I have common issues but fails to specifically provide a distinction. The high efficiency burner claimed in Group I might be used for cooking and not specifically limited to cladding a pre-form as used in Group II. Thus, the groups do not share common examination and search issues as argued by Applicant.

The requirement is still deemed proper and is therefore made FINAL.

### ***Drawings***

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "222" has been used to designate both a lower fixing chuck and a second pre-form (See specification, second Paragraph of Page 8). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a) because they fail to show a clear distinction among a first pre-form 216, a quartz tube 226 and a support quartz tube 224 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Element 1 in figure 2 and Element "TIP" in figures 1 and 3. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 2-12 recite the limitation "a supplementary support quartz tube connected at a first end to the lower fixing chuck and connected at a second end...to another end of the first optical fiber pre-form" in lines 14-16 of claim 8. At page 8 lines 16-17, the specification provides only for "a second quartz tube having a support quartz tube." Additionally, "a second quartz tube inserted into the first optical fiber pre-

form" limitation lacks antecedent basis, the specification only provides for a pre-form to be inserted into a second quartz tube not a second quartz tube to be inserted into a pre-form rod.

In claim 9, there is insufficient antecedent basis of the limitation, "respective ends of the burner are operable independently when sealing... a quartz tube".

In claim 2, there is insufficient antecedent basis of the limitation, "said burner operable independently of each other".

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2 and 9 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for independently control the mass flow of the hydrogen and oxygen gas being supplied to the fuel dischargers, does not reasonably provide enablement for "the respective ends of the burner are operable independently" as recited in claim 9 and "said burner bodies are operable independently" as recited in claim 2. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear how "the respective ends of the burner are operable independently" recited in claim 9 and "said burner bodies are operable independently" recited in claim 2 are independently operated.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Perry (US 4,596,589) and in further view of Dong et al (US 6,460,378). Perry discloses an apparatus for over-cladding a pre-form. The claimed, "upper and lower fixing chucks mounted on respective upper and lower sides of a tower" are deemed as headstock 34 and tailstock 26 of Perry. The claimed "a first optical fiber pre-form being connected at one end to a second end of the handle rod" is deemed as the pre-form rod 22 being connected to the handle rod 24 (See bridging paragraph of Col. 3-4). Perry's quartz barrier tube 28, covering pre-form core rod 22, is considered as the claimed "a second quartz tube inserted into the first optical fiber pre-form" and the claimed "burner arranged between the second end of the handle rod and the lower fixing chuck" is Perry's burner 18. Perry is silent disclosing "a

Art Unit: 1731

supplementary support quartz tube connected at a first end to the lower fixing chuck and connected at a second end connected to another end of the first optical fiber pre-form". However, the claimed supplementary support quartz as shown by Dong et al at column 6 lines 7-16, provides support for the pre-form rod and the over clad tube (the claimed second quartz tube). The support quartz is further connected to a lower fixing chuck, support rod 36. Additionally, the claimed "handle rod connected at a first end to the upper fixing chuck" is deemed as Dong's handle rod shown to be conventional means of supporting pre-form connected in order to better maneuver the pre-form (Dong Col.4, lines 7-14). Thus, at the time the invention was made it would have been obvious to one of ordinary skill in the art to have modified Perry's apparatus with a support quartz as taught by Dong et al in order to provide support to the pre-form and barrier tube (claimed second quartz tube). Additionally Perry and Dong et al are silent disclosing the details of the claimed burner "comprising at least two rows of fuel dischargers including an oxygen discharger and a hydrogen discharger, and said at least two rows of fuel dischargers being divided by a partition." However, Applicant's admission (Figure 1 and Third Paragraph on page 3) discloses that conventional burners comprise of a row of fuel dischargers that supply oxygen and hydrogen, burner covers at each end and individual mass flow controllers (MFC) for the hydrogen and oxygen fuel dischargers. The admission lacks the claimed additional row of fuel discharger divided by a partition. However, it would have been obvious to one of

ordinary skill in the art to have provided a duplicated burner to the cladding apparatus of Perry since it has been held that "Although the reference do not disclose a plurality of ribs (in the instant case an additional burner), the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced." (In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)). Thus the apparatus resulting from the teachings of Perry and Dong et al and duplication of a burner would result in the claimed cladding apparatus "having two rows of fuel dischargers divided by a partition" which is met when the duplicated burner having a row of fuel dischargers is divided by the cover of the other burner which has the claimed second row of fuel dischargers.

As for claims 3-4 and 9-11, the duplicated burners would independently have their own MFC and thus considered operable independently.

As for claim 6, the burners are capable of burning LPG or butane gas.

As for claim 12, MFC encompasses flow meters.

As for claim 2, each burner as shown by Applicant's admission includes burner bodies 134 between burner covers 132.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References A-K and N in PTO-892 have been cited to show the state of the art.



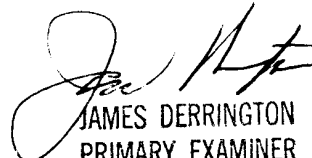
Art Unit: 1731

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is (703) 605-1174. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (703) 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

C.L.  
May 22, 2003

  
JAMES DERRINGTON  
PRIMARY EXAMINER  
ART UNIT ~~137~~/731